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May 19, 2006

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04-249044
STPL-6204(057) N

Addendum No. 3

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in ALAMEDA COUNTY IN AND NEAR HAYWARD AND SAN LEANDRO ON ROUTE 880 FROM 0.3 KM NORTH OF THE WEST A STREET UNDERCROSSING TO 0.1 KM NORTH OF THE LEWELING BOULEVARD UNDERCROSSING AND ON ROUTE 580 FROM 0.3 KM EAST OF THE STROBRIDGE AVENUE UNDERCROSSING TO THE WEST 580-NORTH 238 CONNECTOR SEPARATION AND ON ROUTE 238 FROM THE WEST 580-NORTH 238 CONNECTOR SEPARATION TO THE WASHINGTON STREET OFF-RAMP.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on June 7, 2006.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions, and the Proposal and Contract.

Project Plan Sheets 37, 92, 93, 96, 507, 509, 988, 1063, 1068 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 96A and 96B are added. Half-sized copies of the added sheets are attached for addition to the project plans.

In the Special Provisions, Section 2-1.01, "GENERAL," the following two paragraphs are added after the first paragraph as follows:

"The proposal shall set forth in clearly legible figures and in the respective spaces provided:

A. Unit Prices
B. Item Totals
C. TOTAL BID (A)
D. Number of working days bid for completion of the work
E. TOTAL BID (B) - product of the working days bid and the cost per day shown on the Engineer's Estimate
F. TOTAL BASIS FOR COMPARISON OF BIDS (A+B)

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The proposal shall be signed by the bidder, who shall fill out the blanks in the proposal form as therein required."

In the Special Provisions, Section 2-1.01, "GENERAL," the following paragraph is added after the second paragraph as follows:

"The amount of the bidder's security required in Section 2-1.07, "Proposal Guaranty," of the Standard Specifications shall be based on the "TOTAL BID (A)" set forth on the proposal form."

In the Special Provisions, Section 3, "AWARD AND EXECUTION OF CONTRACT," the following two paragraphs are added after the second paragraph as follows:

"Bids will be compared on the basis of the Engineer's Estimate of the quantities of work to be done and the number of working days bid for completion of the work . The award of the contract, if it be awarded, will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed. The lowest bid will be determined on the basis of the "Total Basis for Comparison of Bids (A+B)" set forth in the proposal. The contract price for the awarded contract will be the "Total Bid (A)" set forth in the proposal.

Bids in which the number of working days bid for completion of the work exceed 900 will be considered non-responsive and will be rejected."

In the Special Provisions, Section 5-1.14, "COMPENSATION ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS," the first paragraph is revised as follows:

"The provisions of this section shall apply only to the following contract items:

ITEM CODE	ITEM
390104	ASPHALT CONCRETE
290201	ASPHALT TREATED PERMEABLE BASE
390126	RUBBERIZED ASPHALT CONCRETE (TYPE G)
390127	RUBBERIZED ASPHALT CONCRETE (TYPE O)"

In the Special Provisions, Section 5-1.15, "PAYMENTS," is revised as attached.

In the Special Provisions, Section 5-1.20, "ENVIRONMENTALLY SENSITIVE AREA," is replaced with Section 5-1.20, "ENVIRONMENTALLY SENSITIVE AREA (ESA 1 AND ESA 3)," as attached.

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In the Special Provisions, Section 5-1.21, "ENVIRONMENTALLY SENSITIVE AREA (ESA 2)," is added as attached.

In the Special Provisions, Section 5-1.22, "GENERAL MIGRATORY BIRD PROTECTION," is added as attached.

In the Special Provisions, Section 10-1.105, "TEMPORARY DECK BRIDGING," is added as attached.

In the Special Provisions, Section 10-1.13, "COOPERATION," the third paragragh is revised as follows:

"Contracts which may be in progress during the working period of this contract, include, but are not necessarily limited to the following:

1. Contract No. 04-165404 providing seismic retrofit of Route-880 - High Street Overhead Structure in city of Oakland.
2. Contract No. 04-170604 providing seismic retrofit of Route-880 - Fifth Avenue Overhead Structure in city of Oakland.
3. Contract No. 04-016014 constructing I-880/SR 92 improvements in City of Hayward.
4. Contract No. 04-174504 providing Washington Avenue Interchange Improvements in City of San Leandro.
5. Contract No. 04-0120R4, constructing Temporary Bypass Structure in the city and County of San Francisco, on Route 80, at Yerba Buena Island between KP 12.6 (PM 7.8) and KP 13.2 (PM 8.2).
6. LAVWMA project
7. Contract No. 04-130524, constructing Maintenance Station in City of San Leandro.
8. Widening Lewelling Blvd/E. Lewelling Blvd between Hesperian Blvd and Meekland Ave. in San Leandro by ACTIA/County.
9. Washington Avenue Interchange Improvements in City of San Leandro by City of San Leandro.
10. Contract No. 04-284314, PCC Pavement Replacement work on I-580 east of the I-238/I-580 Interchange."

In the Special Provisions, Section 10-1.14, "PROGRESS SCHEDULE (CRITICAL PATH METHOD)," in the subsection "GENERAL REQUIREMENTS," the fifth paragraph is revised as follows:

"Schedules shall have not less than 450 and not more than 750 activities, unless otherwise authorized by the Engineer. The number of activities shall be sufficient to assure adequate planning of the project, to permit monitoring and evaluation of progress, and to do an analysis of time impacts."

In the Special Provisions, Section 10-1.14, "PROGRESS SCHEDULE (CRITICAL PATH METHOD)," in the subsection "COMPUTER SOFTWARE," the first paragraph is revised as follows:

"The Contractor shall submit to the Engineer for approval a description of proposed software before delivery. The software shall be the current version of Primavera Project Planner (P3), Primavera SureTrak Project Manager or equal, and shall be compatible with the most current version of Microsoft Windows operating system. If software other than P3 or SureTrak is proposed, it shall be capable of generating files that can be imported into P3 or SureTrak."

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In the Special Provisions, Section 10-1.32, "EXISTING HIGHWAY FACILITIES," in subsection "RECONSTRUCT CONCRETE BARRIER (TYPE BART D) the following paragraph is added after the fourth paragraph as follows:

"Full compensation for BART safety construction fence shall be considered as included in the contract price paid per meter for reconstruct concrete barrier (Type BART D) and no separate payment will be made therefor."

In the Special Provisions, Section 10-1.32, "EXISTING HIGHWAY FACILITIES," the subsection "RECONSTRUCT CONCRETE BARRIER (TYPE MODIFIED BART-D) is added as follows:

"RECONSTRUCT CONCRETE BARRIER (TYPE MODIFIED BART-D)

Existing concrete barrier and fence and gate, including the barbed wire, where shown on the plans to be reconstructed, shall be reconstructed. Existing BART sign panels that are attached to the existing BART barrier that is to be reconstructed shall be removed and reattached per the Engineer's direction.

Concrete barriers shall conform to the provisions in Section 83-2, "Barriers," of the Standard Specifications and these special provisions.

Attention is directed to "Order of Work" of these special provisions regarding the reconstruction of concrete barrier at those locations exposed to public traffic.

New fence, barbed wire, extension arms and hardware shall be furnished and used to reconstruct the fence and barbed wire on reconstructed concrete barrier. New fence and hardware shall conform to the provisions in Section 80, "Fences," of the Standard Specifications. New barbed wire and extension arms shall conform to the provisions in "Reconstruct Barbed Wire Extension Arm" of these special provisions.

Fence, barbed wire, extension arms and other components that are not used in the reconstruction work shall be disposed of.

Reconstructed fence and barbed wire shall be connected to existing fence and barbed wire.

The sign panels to be removed shall be field marked prior to removal to establish the locations. Up to 15 BART signs will be removed and attached."

In the Special Provisions, Section 10-1.32, "EXISTING HIGHWAY FACILITIES," the subsection "RECONSTRUCT BARBED WIRE EXTENSION ARM" is added as follows:

"RECONSTRUCT BARBED WIRE EXTENSION ARM

Existing barbed wire extension arms, where shown on the plans to be reconstructed, shall be reconstructed.

New barbed wire, extension arms and hardware shall be furnished and used to reconstruct barbed wire extension arm.

Barbed wire extension arms shall be pressed steel conforming to ASTM A526, hot-dip galvanized after fabrication, complete with provision for anchorage to end, corner, and pull posts and for attaching necessary rows of barbed wire to each arm. Arms shall be 45-degree angle or vertical as indicated on the plans. Arms shall be integral with post top weather cap. Intermediate arms shall have hole for passage of top tension wire. Arms shall be capable of withstanding 136 kg (300 lbs) downward pull at outermost end of arm without failure.

Barbed wire shall be two-strand, zinc-coated, 12 ½ gage steel wire with 14 gage, 4-point steel barbs spaced 12.7 cm (5 in.) apart, conforming to ASTM A121. Zinc coating shall be Class 3, 0.27 kilogram per square meter (0.80 ounce per square foot) for 12 ½ gage wire and 0.22 kilogram per square meter (0.65 ounce per square foot) for 14 gage wire."

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In the Special Provisions, Section 10-1.32, "EXISTING HIGHWAY FACILITIES," in the subsection "BRIDGE REMOVAL," the following paragraph is added after the eighteenth paragraph:

"The following additional requirements apply to the removal of bridges or portions of bridges that are over or adjacent to roadways that may be closed to public traffic for only brief periods of time:

A. The closure of roadways to public traffic shall conform to the provisions in "Order of Work" and "Maintaining Traffic" of these special provisions.
B. Prior to closing a roadway to traffic to accommodate bridge removal operations, the Contractor shall have all necessary workers, materials, and equipment at the site as needed to proceed with the removal work in an expeditious manner. While the roadway is closed to public traffic, work shall be pursued promptly and without interruption until the roadway is reopened to public traffic.
C. Bridge removal operations shall be performed during periods of time that the roadway is closed to public traffic except as specified herein for preliminary work.
D. Preliminary work shall be limited to operations that will not reduce the structural strength or stability of the bridge, or any element thereof, to a level that in the judgment of the Engineer would constitute a hazard to the public. This preliminary work shall also be limited to operations that cannot cause debris or any other material to fall onto the roadway. Protective covers may be used to perform preliminary work such as chipping or cutting the superstructure into segments, provided the covers are of sufficient strength to support all loads and are sufficiently tight to prevent dust and fine material from sifting down onto the traveled way. Protective covers shall extend at least 1.2 m beyond the limit of the work underway. Bottom slabs of box girders may be considered to be protective covers for preliminary work performed on the top slab inside the limits of the exterior girders.
E. Temporary support shoring and temporary bracing shall be used in conjunction with preliminary work when necessary to insure the stability of the bridge.
F. Temporary support shoring, temporary bracing, and protective covers shall not encroach closer than 2.4 m horizontally from the edge or 4.6 m vertically above any traffic lane or shoulder that is open to public traffic.
G. During periods when the roadway is closed to public traffic, debris from bridge removal operations may be allowed to fall directly onto the lower roadway provided adequate protection is furnished for all highway facilities. The minimum protection for paved areas shall be a 0.6-m thick earthen pad or a 25-mm thick steel plate placed over the area where debris can fall. Prior to reopening the roadway to public traffic, all debris, protective pads, and devices shall be removed and the roadway swept clean with wet power sweepers or equivalent methods.
H. The removal operations shall be conducted in such a manner that the portion of the structure not yet removed remains in a stable condition at all times. For girder bridges, each girder shall be completely removed within a span before the removal of the adjacent girder is begun. For slab type bridges, removal operations within a span shall be performed along a front that roughly parallels the primary reinforcing steel."

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In the Special Provisions, Section 10-1.36, "EARTHWORK," the twelfth through eighteenth paragraphs are revised as follows:

"Settlement periods are required for the bridge approach embankments at the bridges listed in the following table.

Surcharge embankments shall be constructed at the grading plane where listed in the following table:

Bridge Name or Number	Abutment Number	Bent Number	Surcharge Height (meters)	Settlement Period (days)
N880-E238 Connector Ramp (Widen)	1	—	0.0*	60
N880-E238 Connector Ramp (Widen)	3	—	0.0*	30
Ashland Avenue Undercrossing (Widen)	1	—	0.0*	75
Ashland Avenue Undercrossing (Widen)	2	—	0.0*	75
Hesperian Boulevard Undercrossing Br. No. 33-216K	1	—	0.0*	300
Hesperian Boulevard Undercrossing Br. No. 33-216K	2	—	0.0*	300

* At this location, the surcharge embankment shall be constructed by extending the grading plane (GP) in the "Elevation" view of the "Bridge Embankment Surcharge" detail of Standard Plan A62B horizontally to the centerline of abutment.

At the Contractor's option, drainage wicks may be installed to reduce the settlement period at Hesperian Boulevard Undercrossing, Br. No. 33-0216K approach embankment. Drainage wicks shall conform to the provisions in "Drainage Wick," of these special provisions.

The fill at Hesperian Boulevard Undercrossing, Br. No. 33-0216K approach embankment shall be placed in two stages with approximately two-thirds of the total fill height placed in the first stage. After each stage, the settlement period listed above for Hesperian Boulevard Undercrossing, Br. No. 33-0216K shall apply.

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Settlement periods are required for the roadway embankments at the earth retaining structures listed in the following table.

Earth Retaining Structure Number	Settlement Period (days)
Retaining Wall No. 3	30
Retaining Wall No. 4	60
Retaining Wall No. 5	30
Retaining Wall No. 6	30
Retaining Wall No. 7	300
Retaining Wall No. 8	150-210
Retaining Wall No. 9 (Type 1 SWB-spread footing)	30
Retaining Wall No. 9 (Type 1 SWB-pile foundation)	30
Retaining Wall No. 10	30
Retaining Wall No. 11 (Type 1 SWB-pile foundation)	30
Retaining Wall No. 11 (Type 1 SWB-spread footing)	30
Retaining Wall No. 12 (Type 1 SWB-pile foundation)	30
Retaining Wall No. 12 (Type 1 SWB-spread footing)	30
Retaining Wall No. 12 (Type 5 SWB-CIDH pile foundation-light weight fill)	0
Retaining Wall No. 18	30

At the Contractor's option, drainage wicks may be installed at Retaining Wall No. 7 and Retaining Wall No. 8 to reduce the settlement period. Drainage wicks shall conform to the provisions in "Drainage Wick" of these special provisions.

The fill at Retaining Wall No. 7 and No. 8 shall be placed in two stages with approximately two-thirds of the total fill height placed in the first stage. After each stage, the settlement period listed above for Retaining Wall No. 7 and No. 8 shall apply.

The duration of the required settlement period at each location will be determined by the Engineer. The estimated duration of the settlement periods are listed in the tables of settlement data. The Engineer may order an increase or decrease in any settlement period. An ordered increase or decrease in any settlement period will result in an increase or decrease in the number of contract working days if the settlement period involved is considered to be the current controlling operation in conformance with the provisions in Section 8-1.06, "Time of Completion," of the Standard Specifications. Adjustments of contract time due to increases or decreases in settlement periods will be made by contract change order.

The settlement periods for other roadway embankments shall be as follows: embankments that are 6 m or more in height, three to four months; embankments that are 3 m to 6 m in height, two months; embankments less than 3 m in height, 30 days. The settlement periods are required between construction of the embankments and the construction of settlement sensitive items including soundwalls, drainage pipes, drainage structures and final paving."

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In the Special Provisions, Section 10-1.60, "PILING", in the subsection "GENERAL," sub-subsection "Jetting" is added after sub-subsection "Driving System Submittal" as follows:

"Jetting
Jetting to obtain the specified penetration in conformance with the provisions in Section 49-1.05, "Driving Equipment," of the Standard Specifications shall not be used for driven type piles."

In the Special Provisions, Section 10-1.60, "PILING," in the subsection "STEEL PIPE PILING," the following paragraph is added after the first paragraph of sub-subsection "General" as follows:

"Except for field welding, as defined herein, the provisions of "Welding Quality Control" of these special provisions shall not apply to steel pipe piling at the locations listed in the following table:

Bridge Name or Number	Abutment Number	Bent Number
Route 238/185 Separation (Bridge No. 33-0212L)	—	2
Kent Avenue Overhead (Left) (Widen) (Bridge No. 33-0217L)	—	2
Kent Avenue Overhead (Right) (Widen) (Bridge No. 33-0217R)	—	2"

In the Special Provisions, Section 10-1.60, "PILING," the subsection "NONDESTRUCTIVE TESTING FOR STEEL PIPE PILING" is deleted.

In the Special Provisions, Section 10-1.61, "CONCRETE STRUCTURES," the subsection "PERMANENT STEEL DECK FORMS" is added after subsection "COST REDUCTION INCENTIVE PROPOSALS FOR CAST-IN-PLACE PRESTRESSED BOX GIRDER BRIDGES" as attached.

In the Special Provisions, Section 10-1.64, "STRUCTURE APPROACH SLABS (TYPE R)," is replaced as attached.

In the Proposal and Contract, the Engineer's Estimate Items 47, 221, 222, and 223 are revised, Items 290, 291 and 292 are added, and Item 289 is deleted as attached.

To Proposal and Contract book holders:

Replace pages 5, 14, and 17, of the Engineer's Estimate in the Proposal with the attached revised pages 5, 14, and 17, of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the NOTICE TO CONTRACTORS section of the Notice to Contractors and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

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This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it. A copy of this addendum is available for the contractor's use on the Internet Site:

http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief
Office of Plans, Specifications & Estimates
Office Engineer

Attachments

5-1.15 PAYMENTS

Attention is directed to Sections 9-1.06, "Partial Payments," and 9-1.07, "Payment After Acceptance," of the Standard Specifications and these special provisions.

For the purpose of making partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications, the amount set forth for the contract items of work hereinafter listed shall be deemed to be the maximum value of the contract item of work which will be recognized for progress payment purposes:

A. Clearing and Grubbing	$285,655
B. Develop Water Supply	$26,400
C. Lead Compliance Plan	$2,340
D. Progress Schedule (Critical Path Method)	$83,000
E. Prepare Storm Water Pollution Prevention Plan	$3,750

After acceptance of the contract pursuant to the provisions in Section 7-1.17, "Acceptance of Contract," of the Standard Specifications, the amount, if any, payable for a contract item of work in excess of the maximum value for progress payment purposes hereinabove listed for the item, will be included for payment in the first estimate made after acceptance of the contract.

In determining the partial payments to be made to the Contractor, only the following listed materials will be considered for inclusion in the payment as materials furnished but not incorporated in the work:

A. Piling
B. Metal Sign Structures
C. Pavement Markers
D. Signal and Lighting Standards
E. Prestressing Steel for Cast-in-Place Members (sealed packages only)
F. Prestressing Anchorages and Ducts
G Precast Concrete Panels for Earth Retaining Structures
H. Precast Prestressed Concrete Box Girders
I. Masonry Blocks for Sound Walls
J. Type B Joint Seal
K. Bar Reinforcing Steel
L. Structural Steel
M. Welded Steel Pipe
N. Miscellaneous Bridge Metal
O. Bridge Drainage System
P. Chain Link Railing
Q. Chain Link Fence

5-1.20 ENVIRONMENTALLY SENSITIVE AREA (ESA 1 AND ESA 3)

Attention is directed to the designated Environmentally Sensitive Areas (ESAs) shown on the plans.

A. ESA 1

B.ESA 3, Historical

The exact location of the boundaries of ESAs are as shown on the plan or as directed by the Engineer and shall be clearly delineated by the placement of temporary fence (Type ESA) as specified in these special provisions.

Within the boundaries of ESAs 1 and 3, no project related construction activities shall take place. This specifically prohibits Contractor's personnel and vehicle access, storage or transport of any materials, including hydrocarbon and lead contaminated material, or any other project related activities, with the sole exception of access to ESA 3 for the purpose of pre-construction and post-construction photo surveys. The Contractor shall take such measures, including the posting of written notices to his employees and subcontractors, to ensure that ESAs are not entered or disturbed.

The Contractor shall repair, or perform work to mitigate damage or impacts to ESAs caused by the Contractor's operations, at the Contractor's expense. If the Engineer determines repairs or mitigation work will be performed by others, or if mitigation fees are assessed by the Department, deductions from moneys due or to become due the Contractor will be made for the repair or mitigation costs.

An archaeological and historical pre-construction meeting with the Contractor, subcontractors, Engineer, and Department staff archaeologist and architectural historian shall be held at least 5 days prior to the start of construction. The purpose of this meeting is to discuss archaeological issues, ascertain delineation of the locations of the ESA 1, ESA 3, and SCA (Special Construction Area-detailed in Historical ESA 3) on the ground, and introduce the Department staff archaeologist and architectural historian to the Contractor.

Full compensation for conforming to the various ESA requirements shall be considered as included in the contract prices paid for the various contract items of work and no additional compensation will be allowed therefore. Attention is directed to ESA 1, Historical ESA 3 and Special Construction Area (SCA) of these special provisions. The Contractor shall comply with the requirements:

Construction

The Contractor shall leave archaeological materials, including human burials or skeletons, undisturbed in accordance with the following codes and these special provisions:

A. California Public Resources Code, Chapter 1.7, Section 5097.5;
B. California Administrative Code, Title 14, Section 4308;
C. California Penal Code, Title 14, Part 1, Section 622-1/2; and
D. California Public Resources Code, Sections 5097.98 and 5097.99.

Archaeological materials are defined as the physical remains of past human activity, and include historic-period archaeological materials and prehistoric Native American archaeological materials. Nonhuman fossils are not considered to be archaeological except when showing direct evidence of human use or alteration, or when they are found in direct physical association with archaeological materials as described in these special provisions.

Historic-period archaeological materials include cultural remains beginning with initial European contact in California, but at least 50 years old. These materials are most often discovered in the form of clearly defined trash deposits or disposal pits containing tin cans, bottles, ceramic dishes, or other domestic refuse indicating previous occupation or use of the site. Structural remains including brick, concrete, wood, or other building material found above or below ground are also considered archaeological materials.

Prehistoric Native American archaeological materials may include:

A. human skeletal remains or associated burial goods such as beads or ornaments;
B. evidence of tool making or hunting such as arrowheads and associated chipping debris of fine-grained materials such as obsidian, chert, or basalt;
C. evidence of plant processing such as pestles, grinding slabs, or stone bowls;
D. evidence of occupation such as cooking pits, stone hearths, packed or burnt earth floors; or

E. remains from food processing such as concentrations of discarded or burnt animal bone, shellfish remains, or burnt rocks used in cooking.

If human skeletal material or other archaeological finds are encountered by the Contractor during construction, the Contractor shall stop all work within a 60 foot radius of archaeological materials immediately upon discovery and shall notify the Engineer. Work shall not resume until the Engineer has given written approval to the Contractor. If, in the opinion of the Engineer, the Contractor's controlling operation is delayed due to investigation of the archaeological or historic find, the delay will be considered a right of way delay as specified in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The Department may use other forces to investigate the site of the archaeological materials. The cost of labor, equipment, or material provided by the Contractor to assist in the investigation or recovery of archaeological materials will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

All archaeological resources located on Department of Transportation property are property of the State of California.

ESA 1

The ESA and immediate vicinity will be archaeologically monitored during construction to ensure that impacts to archaeological resources will be avoided. Archaeological monitoring will be conducted by and at the discretion of a Department staff archaeologist.

The Contractor, subcontractors and their employees shall cooperate with the archaeologists with regard to the discovery and evaluation of archaeological materials, if any are uncovered during construction.

HISTORICAL ESA 3, SPECIAL CONSTRUCTION AREA (SCA) AND SCREEN FENCING

Attention is directed to "Photo Survey of Existing Facilities" of these special provisions.

The San Lorenzo Cemetery designated as a historical ESA (ESA 3). Temporary fencing (type ESA) shall be positioned just outside the existing north cemetery fence. Public access through the gate on the south side of the cemetery shall be maintained.

A Special Construction Area (SCA) adjacent to ESA 3 shall be designated as shown on the plans. No subsurface construction activities are permitted inside the SCA.

A pre-construction photo survey of the existing monuments, curbs, grave fencing and other cemetery features in ESA 3 located within 15.5m from North fence shall be performed by the Contractor and coordinated with the Engineer. Photo survey shall be completed 15 days prior to the beginning of construction activities in the area located closer than 100 meters from the north cemetery fence. A post-construction photo survey of ESA 3 shall be performed on the same facilities within 5 working days after completion of pile driving and demolition activities.

The photographs shall conform to the requirements outlined in section "Photo Survey of Existing Facilities" of these special provisions.

Contractor shall notify Engineer 7 working days prior to the beginning of the photo survey. The Engineer shall provide access for the Contractor when conducting the photo survey

Full compensation for conducting the photo survey shall be considered as included in the contract lump sum price paid for photo survey of existing facilities and no additional compensation will be allowed therefore.

The Contractor shall repair, or perform work to mitigate, damage or impacts to ESA 3 caused by the Contractor's operations, at the Contractor's expense. All repairs and reconstruction shall follow the Secretary of the Interior standards for the treatment of historic properties and shall be undertaken by a licensed preservation architect. See web site http://www2.cr.nps.gov/tps/standard_guidelines, for details. The Contractor shall submit a repair plan to the Engineer for approval prior to the start of such work.

5-1.21 ENVIRONMENTALLY SENSITIVE AREA (ESA2)

Attention is directed to the designated Environmentally Sensitive Area (ESA2) shown on the plans.

An environmentally sensitive area (ESA2)shall consist of an area within and near the limits of construction where access is prohibited or limited for the preservation of existing vegetation, or protection of biological habitat as shown on the plans. The Engineer will determine the exact location of the boundaries of the ESA2. No work shall be conducted within the ESA2.

Attention is directed to Section 7—1.01 "Laws to be Observed," and Section 7—1.04 "Permits and Licenses," of the Standard Specifications regarding State and Federal regulations, permits, or agreements which pertain to an ESA.

Prior to beginning work, the boundaries of the ESA2 shall be clearly delineated by the placement of temporary fence (Type ESA). The redwood trees located along the San Lorenzo High School shall have the temporary fence (Type ESA) placed along the length of the redwood stand, located a distance of 1.5 meters in highway right-of-way.

Vehicle access, storage or transport of materials or equipment, or other project related activities are prohibited within the boundaries of ESA2. Only foot traffic will be allowed within the ESA2.

The Contractor shall mitigate damage or impacts to the ESA2 caused by the Contractor's operations, at the Contractor's expense. If the Engineer determines mitigation work will be performed by others, or if mitigation fees are assessed the Department, deductions from moneys due or to become due the Contractor will be made for the mitigation costs.

5-1.22 GENERAL MIGRATORY BIRD PROTECTION

The Contractor shall protect migratory birds, their occupied nests, and their eggs as specified in these special provisions

Nesting or attempted nesting by migratory birds is anticipated to occur between, but not limited to, February 15 and September 1.

The Federal Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), Title 50 Code of Federal Regulations part 10, and California Department of Fish and Game Code Sections 3503, 3513, and 3800, protect migratory birds, their occupied nests, and their eggs.

The Federal and California Endangered Species Acts protect occupied and unoccupied nests of some threatened and endangered bird species. The Bald Eagle Protection Act (16 U.S.C. 668) prohibits the destruction of bald and golden eagles occupied and unoccupied nests.

Pre-construction surveys for nesting migratory birds shall be conducted 10 days prior to any vegetation removal. When evidence of migratory bird nesting that may be adversely affected by construction activities is discovered, or when birds are injured or killed as a result of construction activities, the Contractor shall immediately stop work within 75 m of the nests and notify the Engineer. Work shall not resume until the Engineer provides written notification that work may begin in this location.

Preventing nesting by using appropriate exclusion techniques will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

Attention is directed to Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications and "Time Related Overhead" of these special provisions.

Nest removal activities shall not deposit in, permit to pass into, or place nest materials where they can pass into the waters of this state.

Penalties as used in this section, "General Migratory Bird Protection," shall include fines, penalties, and damages; whether proposed, assessed, or levied against the Department or the Contractor. Penalties shall also include payments made or costs incurred in settlement for alleged violations of applicable laws, regulations, or requirements. Costs incurred could include sums spent instead of penalties, in mitigation or to remediate or correct violations.

Notwithstanding any other remedies authorized by law, the Department may retain or withhold monies due the Contractor under the contract, in an amount determined by the Department, up to and including the entire amount of penalties proposed, assessed, or levied as a result of the Contractor's violation of Federal or State law, regulations or requirements. Funds may be retained by the Department until final disposition has been made as to the penalties. The Contractor shall remain liable for the full amount of penalties until such time as they are finally resolved with the entity seeking the penalties. Upon final disposition, the Department shall inform the Contractor of the withheld amount.

10-1.105 TEMPORARY DECK BRIDGING

When portions of the existing approach slab and adjacent roadway pavement are removed for construction of abutment seat extensions, the Contractor shall either complete the new abutment seat extension, including curing concrete, before opening that portion of the roadway to traffic, or furnish and install temporary deck bridging until the portions of the new abutment seat extension are complete in place, as determined by the Engineer. Temporary deck bridging shall be one of the following:

A. Temporary deck bridging system that spans the void or incomplete work.
B. Temporary roadway structural section that fills the voids in the pavement.

Construction and removal of temporary deck bridging shall conform to Section 15, "Existing Highway Facilities," of the Standard Specification and "Maintaining Traffic" of these special provisions.

Temporary Deck Bridging System

Temporary deck bridging system, consisting of steel plates and beams assemblies and connections necessary to support the structures, shall be designed and constructed in conformance with Section 7-1.01E, "Trench Safety,", and Section 7-1.09, "Public Safety," and Section 51-1.06A(2), "Design Stresses, Loadings, and Deflections," of the Standard Specifications and these special provisions.

Design and Working Drawings

The Contractor shall submit to the Engineer working drawings and design calculations for temporary deck bridging systems in conformance with Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The drawings and design calculations shall be signed by an engineer who is registered as a Civil Engineer in the State of California. Five sets of the drawings and one copy of the design calculations shall be furnished.

The working drawings shall include the following:

A. Description, location and value of all loads.
B. Maximum deflection of temporary bridging system.
C. Description of equipment.
D. Details for connection between the temporary deck bridging system and the existing structure and roadway pavement.
E. Stress sheets, anchor bolts layout and shop plans.
F. Modification and restoration details for the existing structure.
G. Storage location of temporary deck bridging system materials that allows for construction within 30 minutes.
H. Construction sequence and schedule details.
I. Removal details for temporary deck bridging systems.

The Contractor shall allow 3 weeks for the review of temporary deck bridging systems working drawings after complete drawings, calculations and all support data have been submitted to the Engineer.

Should the Engineer fail to complete the review within the time allowed and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in the working drawing review, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The temporary deck bridging system shall support vehicular live loads, dead loads, construction equipment loads and additional loads imposed by the Contractor's operations. The construction equipment loads shall be the actual weight of the construction equipment.

The minimum vehicular loading for the temporary deck bridging system shall be the greater of AASHTO HS20-44 loading with 100 percent impact or AASHTO Permit loading with 100 percent impact. The minimum breaking forces for the temporary deck bridging system and connections to the existing roadway shall be 35 percent of the live load. The temporary bridging system shall be designed so that the deflection due to the vehicular loading with impact as specified in these special provisions, shall not exceed 0.00125 of the clear span length where the temporary deck bridging system is used.

The temporary deck bridging surfaces shall not vary more than 6 mm vertically or 13 mm horizontally from the adjacent existing deck and roadway surfaces.

If the temporary deck bridging surface is above the existing adjacent bridge deck or roadway surfaces, tapers with 100 to 1 slope shall be constructed up to and away from the temporary deck bridging surface. The material used to construct these tapers shall be adequately rigid to support vehicular traffic and shall be selected by the Contractor. If the temporary bridging surface does not extend the entire width of the roadway, the sides of the temporary deck bridging surface shall be tapered at a 12 to 1 slope.

The surface of temporary deck bridging system shall have a uniform surface texture that provides a coefficient of friction of at least 0.35 in conformance with California Test 342.

Temporary deck bridging system shall be mechanically connected to the existing structure and roadway while subjected to vehicular loads and shall not overstress, induce permanent forces into, or produce cracking in the existing structure or roadway to remain in place.

Welding and Nondestructive Testing for Temporary Deck Bridging System

Welding of temporary deck bridging system except for previously welded splices and except for when fillet welds are used where load demands are less than or equal to 175 N/mm for each 3 mm of fillet weld, shall conform to AWS D1.1 or other recognized welding standard. The welding standard to be utilized shall be specified by the Contractor on the working drawings. Previously welded splices for temporary deck bridging systems are defined as splices made prior to the deck bridging system being shipped to the project site.

Splices made by field welding of temporary bridging systems at the project site shall undergo nondestructive testing (NDT). At the option of the Contractor, either ultrasonic testing (UT) or radiographic testing (RT) shall be used as the method of NDT for each field weld and any repair made to a previously welded splice in temporary bridging systems. Testing shall be performed at locations selected by the Contractor. The length of a splice weld where NDT is to be performed, shall be a cumulative weld length equal to 25 percent of the original splice weld length. The cover pass shall be ground smooth at the locations to be tested. The acceptance criteria shall conform to the requirements of AWS D1.1, Section 6, for cyclically loaded nontubular connections subject to tensile stress. If repairs are required in a portion of the weld, additional NDT shall be performed on the repaired sections. The NDT method chosen shall be used for an entire splice evaluation including any required repairs.

For all field welded splices, the Contractor shall furnish to the Engineer a letter of certification which certifies that all welding and NDT, including visual inspection, are in conformance with the specifications and the welding standard shown on the approved working drawings. This letter of certification shall be signed by an engineer who is registered as a Civil Engineer in the State of California and shall be provided prior to installing temporary bridging systems in the existing roadway.

For previously welded splices, the Contractor shall determine and perform all necessary testing and inspection required to certify the ability of the temporary bridging system to sustain the stresses required by the temporary deck bridging design. This welding certification shall be in writing, shall be signed by an engineer who is registered as a Civil Engineer in the State of California, and shall be provided prior to placing installing temporary bridging systems in the existing roadway.

Temporary Roadway Structural Section

Construction of temporary roadway structural section shall conform to "Structure Approach slabs (Type R)" of these special provisions.

Temporary roadway structural section shall not be used to cover concrete that has not cured as specified.

Damage to the existing structure or roadway as a result of the Contractor's operations shall be repaired by the Contractor at the contractor's expense and shall be in conformance with the provisions in Section 7-1.11, "Preservation of Property," of the Standard Specifications.

When temporary deck bridging are no longer needed, materials and connections shall be removed from the existing structure and roadway. Modifications to the existing structure shall be restored except where permanent alterations are shown on the plans. Temporary deck bridging materials are the property of the Contractor and removal and disposal shall conform to the requirements in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way" of the Standard Specifications.

Full compensation for designing, furnishing, constructing, maintaining, and removing temporary deck bridging, including working drawings, shall be considered as included in the contract prices paid for the various items of work involved in abutment seat extensions at locations shown on the plans and no separate payment will be made therefor.

PERMANENT STEEL DECK FORMS

Forms for the deck slabs between girders of the Kent Avenue OH (Left) (Widen) (Br No. 33-0217L) and Kent Avenue OH (Right) (Widen) (Br No. 33-0217R), at the option of the Contractor, shall either be constructed and removed as provided in Section 51-1.05, "Forms," of the Standard Specifications, or shall be constructed and left in place in conformance with these special provisions.

Permanent steel deck forms and supports shall be steel conforming to the requirements in ASTM Designation: A653/A653M (Designation SS, Grades 33 through 80) having a coating designation G165. The forms shall be mortar-tight, true to line and grade, and of sufficient strength to support the loads applied.

Detailed working drawings for forms shall be submitted to the Engineer for approval in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. Three sets of drawings shall be submitted. These drawings shall show the grade of steel, the physical and section properties for all deck members, the method of support and grade adjustment, accommodation for skew, and methods of sealing against grout leaks.

Working drawings shall be submitted sufficiently in advance of the start of the affected work to allow time for review by the Engineer and correction by the Contractor of the drawings without delaying the work. Such time shall be proportional to the complexity of the work but in no case shall such time be less than 3 weeks after complete drawings and all support data are submitted.

The design of permanent steel deck forms shall be based on the combined dead load of the forms, reinforcement, and plastic concrete plus an allowance for all anticipated construction loads. The allowance for construction loads shall be not less than 2400 Pa. The combined dead load shall be assumed to be not less than 2560 kg/m^3 for normal concrete and not less than 2080 kg/m^3 for lightweight concrete.

Physical design properties shall be computed in conformance with the requirements of the AISI specification for the "Design of Cold Formed Steel Structural Members."

The maximum allowable stresses and deflections used in the design of steel forms shall be as follows:

A. Tensile stress shall not exceed 0.725 of the specified yield strength of the material furnished or 250 MPa.
B. Deflection due to dead load shall not exceed 0.0056 of form span or 13 mm, whichever is less. In no case shall the dead load for deflection calculations be less than 5750 Pa total.
C. Form camber, used at the option of the Contractor, shall be based on the actual dead load condition. Camber shall not be used to compensate for deflection in excess of the allowable limits.
D. The design span of the form sheets shall be the clear span of the form plus 50 mm measured parallel to the form flutes.

Permanent steel deck forms shall not be used for those sections of deck slabs that contain a longitudinal expansion joint unless additional supports are placed under the joint.

Permanent steel deck forms shall not be welded to the flanges of girders.

Permanent steel deck forms shall not interfere with the movement at deck expansion joints.

The clearance between the surface of permanent forms and any bar reinforcement shall be not less than 25 mm. The configuration of the forms shall be such that the mass of deck slab is not more than 110 percent of the mass of the total deck slab as dimensioned on the plans.

Permanent steel deck forms shall be installed in conformance with the approved working drawings.

Form sheets shall not rest directly on the top of the girder flanges. Sheets shall be securely fastened to form supports and shall have a minimum bearing length of 25 mm at each end. Form supports shall be placed in direct contact with the flange of the girder. Attachment of supports shall be made by bolts, clips or other approved means.

Transverse deck construction joints shall be located at the bottom of a flute and 6-mm weep holes shall be field drilled at not less than 300 mm on center along the line of the joint.

Permanently exposed galvanized form surfaces that are abraded or damaged prior to installation shall be repaired by thoroughly wire brushing the damaged areas and removing all loose and cracked coating, after which the cleaned areas shall be painted with 2 applications of unthinned zinc-rich primer (organic vehicle type) conforming to the provisions in Section 91, "Paint," of the Standard Specifications. Aerosol cans shall not be used. Minor heat discoloration in area of welds need not be repaired.

Full compensation for furnishing and constructing permanent steel deck forms shall be considered as included in the contract price paid per cubic meter for structural concrete, bridge and no additional compensation will be allowed therefor.

CONTRACT NO. 04-249044
ADDED PER ADDENDUM NO. 3 DATED MAY 19, 2006

10-1.64 STRUCTURE APPROACH SLABS (TYPE R)

Structure approach slabs (Type R) shall consist of removing existing pavement and base including reinforced concrete approach slabs, asphalt concrete surfacing, portland cement concrete pavement, subsealing material, and cement treated base and constructing new reinforced concrete approach slabs, at structure approaches as shown on the plans and in conformance with these special provisions.

GENERAL

The thickness shown on the plans for structure approach slabs is the minimum thickness. The thickness will vary depending on the thickness of the pavement and base materials removed.

Where pavement subsealing has been performed under existing approach slabs, the subsealing material shall be removed for its full depth. Where removal of cement treated base is required to construct the approach slab, the entire thickness of the cement treated base shall be removed.

Voids between the new reinforced structure approach slab and the base material remaining in place that are caused by removal of subsealing material or cement treated base shall be filled, at the option of the Contractor, with aggregate base (approach slab) or structure approach slab concrete.

The Contractor shall establish a grade line for new approach slabs which shall provide a smooth profile grade. The profile grade will be subject to the approval of the Engineer.

The Contractor shall schedule his operations so that the pavement and base materials removed during a work period shall be replaced, in that same work period, with approach slab concrete that shall be cured for at least 4 hours prior to the time the lane is to be opened to public traffic as designated in "Maintaining Traffic" of these special provisions. At locations where the work period does not allow a cure time of 4 hours hydraulic cement concrete shall be used. Where hydraulic cement concrete is used, approach slab concrete shall be cured for at least 2 hours prior to the time the lane is to be opened. In the event the existing pavement and base materials are removed and the Contractor is unable to construct, finish, and cure the new approach slab by the time the lane is to be opened to public traffic, the excavation shall be filled with a temporary roadway structural section as specified in this section, "Structure Approach Slabs (Type R)."

At locations where the removal of existing materials and approach slab construction is not required to be completed within the same work period, the requirements for "Temporary Roadway Structural Section" shall not apply. The Contractor shall have the option of:

A. Curing the approach slab concrete for not less than 5 days prior to opening to public traffic, or
B. Constructing the approach slab using concrete with a non-chloride Type C chemical admixture and curing the approach slab concrete at least 4 hours prior to opening to public traffic.

TEMPORARY ROADWAY STRUCTURAL SECTION

A standby quantity of asphalt concrete and aggregate base, equal to the quantity of pavement removed during the work shift, shall be provided at the project site for construction of a temporary roadway structural section where existing approaches to structures are being replaced. The temporary structural section shall be maintained and later removed as a first order of work when the Contractor is able to construct and cure the approach slab within the prescribed time limit. The temporary structural section shall consist of 90-mm thick layer of asphalt concrete over aggregate base.

The aggregate base for the temporary structural section shall conform to the requirements specified under "Aggregate Base (Approach Slab)" of these special provisions.

The asphalt concrete for the temporary structural section shall be produced from commercial quality aggregates and asphalt binder. The grading of the aggregate shall conform to the 19-mm maximum medium grading in Section 39-2.02, "Aggregate," of the Standard Specifications and the asphalt binder shall conform to the requirements of liquid asphalt SC-800 in Section 93, "Liquid Asphalts," of the Standard Specifications. The amount of asphalt binder to be mixed with the aggregate shall be approximately 0.3-percent less than the optimum bitumen content as determined by California Test 367.

Aggregate base and asphalt concrete for the temporary structural section shall be spread and compacted by methods that will produce a well-compacted, uniform base, free from pockets of coarse or fine material and a surfacing of uniform smoothness, texture, and density. The aggregate base and the asphalt concrete may each be spread and compacted in one layer. The finished surface of the asphalt concrete shall not vary more than 15 mm from the lower edge of a 3.6-m straightedge placed parallel with the centerline and shall match the elevation of the existing concrete pavement and structure along the joints between the existing pavement and structure and the temporary surfacing.

The material from the removed temporary structural section shall be disposed of in conformance with Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications except that removed aggregate base may be stockpiled at the project site and reused for construction of another temporary structural section. When no longer required, standby material or stockpiled material for construction of temporary structural sections shall be removed and disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

REMOVING EXISTING PAVEMENT AND BASE MATERIALS

The outline of portland cement concrete to be removed shall be sawed full depth with a power-driven concrete saw.

The outlines of excavations in asphalt concrete shall be cut on a neat line to a minimum depth of 75 mm with a power-driven concrete saw or wheel-type rock cutting excavator before any asphalt concrete material is removed. These excavations shall be permanently or temporarily backfilled to conform to the grade of the adjacent pavement prior to opening the lane to public traffic. Surplus excavated material may be used as temporary backfill material.

Regardless of the type of equipment used to remove concrete within the sawed outline, the surface of the concrete to be removed shall not be impacted within 0.5-m of the pavement to remain in place. Removing existing pavement and base materials shall be performed without damage to the adjacent structure or pavement that is to remain in place. Damage to the structure or to the pavement that is to remain in place shall be repaired in conformance with the provisions in Section 7-1.11, "Preservation of Property," of the Standard Specifications.

Materials removed shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

The base material remaining in-place, after removing the existing pavement and base materials to the required depth, shall be graded uniformly, watered, and compacted. The finished surface of the base material at any point shall not extend above the grade approved by the Engineer.

Areas of the base material that are low as a result of over excavation shall be filled, at the Contractor's expense, with structure approach slab concrete at the time and in the same operation that the new concrete is placed.

AGGREGATE BASE (APPROACH SLAB)

The aggregate base (approach slab) for filling voids below the reinforced structure approach slab concrete shall be produced from commercial quality aggregates consisting of broken stone, crushed gravel or natural rough-surfaced gravel, and sand, or any combination thereof. The grading of the aggregate base shall conform to the 19-mm maximum grading specified in Section 26-1.02A, "Class 2 Aggregate Base," of the Standard Specifications.

Aggregate base (approach slab) for filling voids below the reinforced structure approach slab concrete shall be spread and compacted by methods that will produce a well-compacted, uniform base, free from pockets of coarse or fine material. The aggregate base shall be watered and compacted to the grade approved by the Engineer. Where the required thickness of aggregate base is 200 mm or less, the base may be spread and compacted in one layer. Where the required thickness of aggregate base is more than 200 mm, the base shall be spread and compacted in 2 or more layers of approximately equal thickness. The maximum compacted thickness of any one layer shall not exceed 200 mm. The finished surface of the base material at any point shall not extend above the grade approved by the Engineer. Areas of the base material that are lower than the grade approved by the Engineer, shall be filled with structure approach slab concrete at the time and in the same operation that the new concrete is placed.

STRUCTURE APPROACH SLAB

Reinforced concrete approach slabs shall conform to the provisions for approach slabs in Section 51, "Concrete Structures," of the Standard Specifications and these special provisions.

Concrete for use in approach slabs shall contain not less than 400 kg of cementitious material per cubic meter.

Steel components of abutment ties including plates, nuts, washers, and rods shall conform to the provisions in Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications.

The steel angles at the concrete barrier joint shall conform to the provision in Section 75-1.03, "Miscellaneous Bridge Metal," of the Standard Specifications.

Approach slab concrete that requires a minimum curing period of 4 hours shall be constructed using a non-chloride Type C chemical admixture. Mineral admixture will not be required in this concrete.

Portland cement for use in concrete using a non-chloride Type C chemical admixture shall be Type II Modified, Type II Prestress, or Type III. Type II Modified and Type III cement shall conform to the provisions in Section 90-2.01, "Cement," of the Standard Specifications. Type II Prestress cement shall conform to the requirements of Type II Modified cement, except the mortar containing the portland cement to be used and Ottawa sand, when tested in conformance with California Test 527, shall not contract in air more than 0.053-percent.

The non-chloride Type C chemical admixture shall be approved by the Engineer and shall conform to the requirements in ASTM Designation: C 494 and Section 90-4, "Admixtures," of the Standard Specifications.

The concrete with non-chloride Type C chemical admixture shall be prequalified prior to placement in conformance with the provisions for prequalification of concrete specified by compressive strength in Section 90-9.01, "General," of the Standard Specifications and the following:

A. Immediately after fabrication of the 5 test cylinders, the cylinders shall be stored in a temperature medium of 21 ± 1.5°C until the cylinders are tested.
B. The 4-hour average strength of the 5 test cylinders shall not be less than 5.85 MPa. No more than 2 test cylinders shall have a strength of less than 5.5 MPa.

Hydraulic cement concrete shall conform to the provisions of "Rapid Strength Concrete" of these special provisions, except that hydraulic cement concrete shall be prequalified prior to placement in conformance with the provisions for prequalification of concrete specified by compressive strength in Section 90-9.01, "General," of the Standard Specifications and the following:

A. Immediately after fabrication of the 5 test cylinders, the cylinders shall be stored in a temperature medium of 21 ± 1.5°C until the cylinders are tested.
B. The 2-hour average strength of the 5 test cylinders shall not be less than 17.0 MPa.

Building paper shall be commercial quality No. 30 asphalt felt.

Bar reinforcement or abutment tie rods in drilled holes shall be bonded in conformance with the provisions for drilling and bonding dowels in Section 83-2.02D(1), "General," of the Standard Specifications.

If reinforcement is encountered during drilling before the specified depth is attained, the Engineer shall be notified. Unless the Engineer approves coring through the reinforcement, the hole will be rejected and a new hole, in which reinforcement is not encountered, shall be drilled adjacent to the rejected hole to the depth shown on the plans.

The top surface of approach slabs shall be finished in conformance with the provisions in Section 51-1.17, "Finishing Bridge Decks," of the Standard Specifications. The finished top surface shall not vary more than 6 mm from the lower edge of a 3.6-m straightedge placed parallel with the centerline. Edges of slabs shall be edger finished.

The surface of the approach slab will not be profiled and the Profile Index requirements shall not apply.

Approach slabs shall be cured with pigmented curing compound (1) in conformance with the provisions for curing structures in Section 90-7.01B, "Curing Compound Method," of the Standard Specifications. The minimum curing period as specified herein shall be considered to begin at the start of discharge of the last truck load of concrete to be used in the slab. Fogging of the surface with water after the curing compound has been applied will not be required. Should the film of curing compound be damaged from any cause before the approach slab is opened to public traffic, the damaged portion shall be repaired immediately with additional compound, at the Contractor's expense. Damage to the curing compound after the approach slab is opened to public traffic shall not be repaired.

If the ambient temperature is below 18°C during the curing period, an insulating layer or blanket shall cover the surface. The insulation layer or blanket shall have an R-value rating given in the table below. At the Contractor's option, a heating tent may be used in lieu of or in combination with the insulating layer or blanket:

Temperature range during curing period	R-value, minimum
13°C to 18°C	1
7°C to 13°C	2
4°C to 7°C	3

Tests to determine the coefficient of friction of the final textured surface will be made only if the Engineer determines by visual inspection that the final texturing may not have produced a surface having the specified coefficient of friction. Tests to determine the coefficient of friction will be made after the approach slab is opened to public traffic, but not later than 5 days after concrete placement. The coefficient of friction will be measured by California Test 342. Portions of completed concrete surfaces that are found to have a coefficient of friction less than 0.35 shall be ground or grooved parallel to the center line in conformance with the provisions for bridge decks in Section 42, "Groove and Grind Pavement," of the Standard Specifications.

JOINTS

Hardboard and expanded polystyrene shall conform to the provisions in Section 51-1.12D, "Sheet Packing, Preformed Pads and Board Fillers," of the Standard Specifications.

Type AL joint seals shall conform to the provisions in Section 51-1.12F, "Sealed Joints," of the Standard Specifications. The sealant may be mixed by hand-held power-driven agitators and placed by hand methods.

The pourable seal between the steel angle and concrete barrier shall conform to the requirements for Type A and AL seals in Section 51-1.12F(3), "Materials and Installation," of the Standard Specifications. The sealant may be mixed by hand-held power-driven agitators and placed by hand methods. Immediately prior to placing the seal, the joint shall be thoroughly cleaned, including abrasive blast cleaning of the concrete surfaces, so that all foreign material and concrete spillage are removed from all joint surfaces. Joint surfaces shall be dry at the time the seal is placed.

MEASUREMENT AND PAYMENT

Structural concrete, approach slab (Type R) will be measured and paid for in conformance with the provisions in Section 51-1.22, "Measurement," and Section 51-1.23, "Payment," of the Standard Specifications and these special provisions.

Full compensation for removing and disposing of pavement materials, and for furnishing and placing miscellaneous metal, Type AL joint seals, and pourable seals shall be considered as included in the contract price paid per cubic meter for structural concrete, approach slab (Type R) and no separate payment will be made therefor.

Hydraulic cement concrete used for structural concrete, approach slab (Type R), including all additional costs associated with furnishing and placing hydraulic cement concrete will be measured and paid for as structural concrete, approach slab (Type R).

The quantity of aggregate base (approach slab) to be paid for shall include the actual volume of aggregate base (approach slab) used to fill voids below the reinforced structure approach slab concrete, except for the volume of areas low as a result of over excavation. The volume to be paid for will be calculated on the basis of the constructed length, width, and thickness of the filled voids. Structure approach slab concrete used to fill voids lower than the approved grade of the base, except for the areas low as a result of over excavation by the Contractor, will be measured and paid for by the cubic meter as aggregate base (approach slab).

The contract price paid per cubic meter for aggregate base (approach slab) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing aggregate base (approach slab), complete in place, including excavation and removing and disposing of base and subsealing materials, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for furnishing, stockpiling, and disposing of standby material for construction of temporary structural sections; and for constructing, maintaining, removing, and disposing of temporary structural sections shall be considered as included in the contract price paid per cubic meter for structural concrete, approach slab (Type R) and no separate payment will be made therefor.

Full compensation for drilling and bonding of bar reinforcement or abutment tie rods shall be considered as included in the contract price paid per cubic meter for structural concrete, approach slab (Type R) and no separate payment will be made therefor.

ABUTMENT SEAT EXTENSION

This work shall consist of extending existing abutment diaphragms at locations shown on the plans, in conformance with the details shown on the plans and these special provisions.

Concrete for the abutment seat extensions shall conform to the provisions for structure approach slab (type R) concrete of these special provisions.

At least 6 hours shall elapse between the time of placing concrete for the abutment seat extension and placing concrete for the structure approach slab.

The Contractor shall schedule their operations so at the end of each work period the work is complete or at a point that it can be covered with a temporary bridging prior to the time the lane is to be opened to public traffic as designated in "Maintaining Traffic" of these special provisions.

Attention is directed to "Temporary Deck Bridging" of these special provisions.

Attention is directed to "Reinforcement" of these special provisions.

Drilling of holes and bonding of reinforcing steel dowels shall conform to the provisions for drilling and bonding dowels in Section 83-2.02D(1), "General," of the Standard Specifications. If reinforcement is encountered during drilling before the specified depth is attained, the Engineer shall be notified. Unless the Engineer approves coring through the reinforcement, the hole will be rejected and a new hole, in which reinforcement is not encountered, shall be drilled adjacent to the rejected hole to the depth shown on the plans.

Structure excavation and structure backfill for abutment seat extension will be measured and paid for as structure excavation (bridge) and structure backfill (bridge), respectively.

Structure concrete for abutment seat extension will be measured and paid for as structural concrete, bridge.

Drill and bond dowels will be measured and paid for as drill and bond dowel.

Bar reinforcing steel will be measured and paid for as bar reinforcing steel (bridge).

ENGINEER'S ESTIMATE
04-249044

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
41	150826	REMOVE MANHOLE	EA	1		
42	150829	REMOVE RETAINING WALL	LS	LUMP SUM	LUMP SUM	
43	150830	REMOVE RETAINING WALL (PORTION)	LS	LUMP SUM	LUMP SUM	
44 (S)	151286	SALVAGE SIGN STRUCTURE	EA	2		
45 (S)	151540	RECONSTRUCT CHAIN LINK FENCE	M	120		
46 (S)	151572	RECONSTRUCT METAL BEAM GUARD RAILING	M	460		
47	038347	RECONSTRUCT CONCRETE BARRIER (TYPE BART D)	M	260		
48	152315	RESET CRASH CUSHION	EA	3		
49	152390	RELOCATE ROADSIDE SIGN	EA	87		
50	152430	ADJUST INLET	EA	12		
51	152610	MODIFY MANHOLE	EA	1		
52 (S)	153103	COLD PLANE ASPHALT CONCRETE PAVEMENT	M2	140 000		
53	153215	REMOVE CONCRETE (CURB AND GUTTER)	M	500		
54	153221	REMOVE CONCRETE BARRIER	M	3350		
55	153250	REMOVE SOUND WALL	M	990		
56	153531	ACCESS OPENING, SOFFIT	EA	10		
57	155003	CAP INLET	EA	9		
58	155007	CAP MANHOLE	EA	1		
59	156585	REMOVE CRASH CUSHION	EA	11		
60	157561	BRIDGE REMOVAL (PORTION), LOCATION A	LS	LUMP SUM	LUMP SUM	

ENGINEER'S ESTIMATE
04-249044

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
221 (S-F)	750496	MISCELLANEOUS METAL (RESTRAINER - PIPE TYPE)	KG	2850		
222 (S-F)	750501	MISCELLANEOUS METAL (BRIDGE)	KG	230		
223 (S-F)	750505	BRIDGE DECK DRAINAGE SYSTEM	KG	6620		
224 (S-F)	800385	CHAIN LINK FENCE (TYPE CL-1.2)	M	452		
225 (S)	800391	CHAIN LINK FENCE (TYPE CL-1.8)	M	58		
226 (S)	801365	1.8 M METAL GATE	EA	1		
227 (S)	038355	1.8 METAL FENCE	M	3		
228	038356	OBJECT MARKER (TYPE F)	EA	65		
229	820134	OBJECT MARKER (TYPE P)	EA	1		
230	820151	OBJECT MARKER (TYPE L-1)	EA	5		
231	038357	OBJECT MARKER (TYPE G)	EA	21		
232 (S)	832003	METAL BEAM GUARD RAILING (WOOD POST)	M	930		
233 (S-F)	833032	CHAIN LINK RAILING (TYPE 7)	M	122		
234 (S-F)	833033	CHAIN LINK RAILING (TYPE 7 MODIFIED)	M	145		
235 (F)	833125	CONCRETE BARRIER (TYPE 25)	M	122		
236 (F)	040150	CONCRETE BARRIER BART	M	7		
237 (S)	038380	CONCRETE BARRIER (BART-C)	M	7		
238 (S-F)	839521	CABLE RAILING	M	998		
239 (S)	839584	ALTERNATIVE IN-LINE TERMINAL SYSTEM	EA	6		
240 (S)	839585	ALTERNATIVE FLARED TERMINAL SYSTEM	EA	11		

ENGINEER'S ESTIMATE
04-249044

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
281 (S)	038372	TRAFFIC OPERATIONS SYSTEM (LOCATION 15)	LS	LUMP SUM	LUMP SUM	
282 (S)	038373	TRAFFIC OPERATIONS SYSTEM (LOCATION 16)	LS	LUMP SUM	LUMP SUM	
283 (S)	038374	TRAFFIC OPERATIONS SYSTEM (LOCATION 17)	LS	LUMP SUM	LUMP SUM	
284 (S)	038375	CAMERA UNIT	EA	2		
285 (S)	038376	PAN/TILT UNIT	EA	2		
286 (S)	038377	CAMERA CONTROL UNIT (CCU)	EA	2		
287 (S)	038378	VIDEO ENCODER UNIT (VEU)	EA	2		
288 (S)	038379	INTEGRATED SERVICES DIGITAL NETWORK TERMINAL ADAPTER (ISDN TA)	EA	2		
289	BLANK					
290	039367	RECONSTRUCT CONCRETE BARRIER (TYPE MODIFIED BART-D)	M	290		
291	039368	RECONSTRUCT BARBED WIRE EXTENSION ARMS	M	1910		
292	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

TOTAL BID (A): = _____

TOTAL BID (B):

$ 12,000.00 **X** _____ **=** _____

(Cost Per Day) **(Enter Working Days Bid)**
(Not To Exceed 900 Days)

TOTAL BASIS FOR COMPARISON OF BIDS: (A + B): _____